2019
PROGRAM YEAR

WORKFORCE INFORMATION GRANT

ANNUAL PERFORMANCE REPORT

Maryland
DEPARTMENT OF LABOR

Introduction

The U.S. Department of Labor, Employment and Training Administration (ETA) funds annual grants to the states to analyze, develop, and distribute essential state and sub-state labor market information (LMI) for job seekers, employers, economic developers, and others.

Maryland receives ETA funds through the Workforce Information Grant to States (WIGS) and the Workforce Innovation and Opportunity Act (WIOA). The WIGS is managed by the Office of Workforce Information and Performance (OWIP), Division of Workforce Development and Adult Learning of the Maryland Department of Labor (MD Labor). OWIP is essential for the collection, analysis, dissemination, and interpretation of labor market data for Maryland, its counties, select cities, zip codes, and other smaller areas.

The Labor Market Information (LMI) team within OWIP serves the primary function of providing workforce and economic data and analyses. With LMI, users can make informed decisions on matters ranging from personal choices to decisions involving workforce or economic policy.

This report provides an overview of the work conducted with Maryland's WIGS during the 2019 program year (July 1, 2019, through June 30, 2020). Maryland expends WIG funds during the program year to upgrade and maintain traditional labor market products, as well as introduce new products and services to assist Maryland stakeholders and its customers. These funds were used to accomplish the core deliverables and activities, which include the dissemination of crucial labor market products and responding to requests for LMI. OWIP's mission is to collect, analyze, and produce labor market and workforce information as a service to businesses, job seekers, students, workforce and economic development programs and their community of service providers in Maryland. OWIP follows the following guiding principles to meet its clients' needs:

- Partner with the workforce and economic development community,
- Develop and deploy new information solution tools and systems for the workforce and economic development community,
- Provide products and services that are client and demand-driven, and;
- Be recognized as an essential and reliable source for information solutions that support economic workforce development goals and outcomes.

Workforce Information Database (WID)

MD Labor is currently operating with version 2.8 of the Workforce Information Database (WID), per the guidelines issued by the Analyst Resource Center (ARC). Maryland uses WIG funds and its partnership with Geographic Solutions to create, store, and upload LMI to the WID. Geographic solutions houses Maryland's WID data on it's Virtual OneStop (VOS) system.

The WID is a defining component of labor market information. Its structure defines what LMI is and how it is utilized. The WID enables web and other applications to be developed around a standard. This standard provides a common LMI data model applications can use. Geographic Solutions and its VOS benefit from this common data model, rendering sharing between states a more seamless experience. With a common platform like the WID, if a problem arises, experts are available across states that others can turn to when new requirements become law or staff turnover requires swift onboarding. The WID serves as a foundation for economic data delivery and research information. Data uploaded to the WID resides on the Maryland Workforce Exchange (MWE).

To ensure the WID is up-to-date and each of the ARC-designated core tables are fully populated with relevant data, Geographic Solutions and OWIP staff practice the following measures to ensure data is uploaded to the WID in a timely manner:

- Local Area Unemployment Statistics (LAUS) files are uploaded monthly. This includes statewide and residential labor force, employment, and unemployment statistics.
- Industry data from the Current Employment Statistics (CES) is uploaded monthly. The Quarterly Census of Employment & Wages (QCEW) is updated quarterly.
- Occupational data, from the Occupational Employment Statistics (OES) program, is uploaded annually.
- As per the Training and Employment Guidance Letter 5-19 (TEGL 5-19), the WID is updated annually with the latest short-term (two-year) industry and occupational projections, as well as biennially with long-term (10-year) industry and occupational projections for Maryland statewide.
- The Integrated Postsecondary Education Data System (IPEDS) is updated annually. This data system forms the institutional sampling population for other National Center for Education Statistics (NCES) surveys. As such, IPEDS provides the primary data needed to describe and

analyze trends in postsecondary education in Maryland. IPEDS data includes the number of students enrolled, staff employed, dollars expended, and degrees earned.

Industry & Occupational Projections

In accordance with TEGL 5-19, Maryland produced its short-term employment projections for the 2019-2021 period. These projections are made for Maryland industries and Maryland occupations. Likewise, Maryland finalized its long-term industry and occupational employment projections for the 2018 – 2028 projection period. Maryland used the methodology, software, and guidelines specified by the Projections Managing Partnership (PMP) to produce all projections. Maryland additionally provided staffing patterns (the share of occupations in each industry) for local workforce development areas (LWDAs) using the Local Employment and Wages Information System (LEWIS) software.

Maryland
Employment Projections, 2018 - 2028

	New Jobs Created	2028 Employment Projection
Total Employment	324,046	3,437,253
Industry Projections, 2018 - 2028		
Healthcare and Social Assistance	97,261	490,719
Accommodation and Food Services	54,824	302,515
Educational Services	51,017	374,126
Professional, Scientific, and Technical Services	32,992	302,247
Administrative and Support and Waste Management and Remediation Services	26,589	208,510
Government	18,160	303,999
Occupational Projections, 2018 - 2028		
Food Preparation and Serving Related Occupations	50,077	282,983
Healthcare Practitioners and Technical Occupations	38,775	231,779
Education, Training, and Library Occupations	31,707	240,392
Management Occupations	26,425	266,774
Personal Care and Service Occupations	23,022	152,285
Business and Financial Operations Occupations	20,619	225,499

Employee Development & LMI Training

Throughout the year, OWIP has provided employee development for state partners, by way of LMI trainings. These trainings help to ensure quality service delivery. OWIP's goal is to promote robust use of LMI by offering professional development trainings to workforce agency staff, local American Job Center (AJC) staff, and other stakeholders. Below are the LMI trainings provided by OWIP in PY 2019.

▸ July 20, 2019, OWIP provided in-person training at the Maryland Department of Transportation (MDOT) to 15 workforce and AJC staff. The objective was for attendees to learn how to find labor market products on the MWE.

▸ September 13, 2019, OWIP provided in-person training at MDOT to 15 workforce and AJC staff. The objective was for attendees to learn methods and best practices using LMI data.

▸ October 28, 2019, OWIP provided LMI training to four representatives employed at the financial services firm Morgan Stanley. The purpose of the training was to introduce the different LMI products OWIP produces.

▸ February 25, 2020, OWIP provided in-person training at MDOT to 15 workforce and AJC staff. The objective was for attendees to learn the location of specific labor market products on the MWE.

▸ May 20, 2020, OWIP hosted a webinar named "Local Area Unemployment Statistics (LAUS) Training – Prince George's." This webinar was presented to 12 staff from Employ Prince George's AJC, and provided an in-depth look at the LAUS program. Attendees learned data definitions and terminologies, procedures, best practices, as well as internal and external sources of LAUS data.

▸ June 3, 2020, OWIP hosted a webinar titled Understanding Maryland Unemployment Information. The webinar was presented to 75 LMI stakeholders to learn about the best sources of unemployment information, how to interpret the numbers, and where to get the most recent unemployment and unemployment claims information.

▸ June 5, 2020, OWIP hosted a webinar titled Understanding Maryland Unemployment Information. The webinar was presented to 35 LMI stakeholders to learn about the best sources of unemployment information, how to interpret the numbers, and where to get the most recent unemployment and unemployment claims information.

▸ June 26, 2020, OWIP hosted a webinar training with 25 workforce and AJC staff. The objective was for attendees to learn the location of specific labor market products on the MWE.

Annual Economic Analysis & Other Reports

OWIP produces an annual economic analysis report covering Maryland and its sub-state areas. The report uses the LMI data OWIP provides through its partnership with the Bureau of Labor Statistics (BLS) as well as LMI from other government sources. While this annual report is an ETA requirement, it is a vital resource for personnel within the MD Labor and outside the agency who rely on LMI data for their reporting.

OWIP produces supplementary reports and infographics designed for job seekers, employers, American Job Center (AJC) staff, researchers, and policymakers to make informed decisions. Every published report and publication OWIP creates is accessible on the MWE publications page. Below are examples of some of OWIP's reports and publications, along with links to each report.

2019 Economic Analysis Report

A required submission to ETA, the Economic Analysis Report is a detailed analysis of Maryland's economy, market trends, and challenges at the state and local levels.
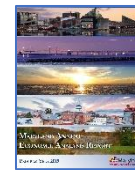
Monthly Labor Review

The Monthly Labor Review is a monthly publication located on the MD Labor and MWE websites. The Monthly Labor Review provides the state's employment situation for Maryland, its counties, select cities, and metropolitan statistical areas.

Program Information Sheet

Program Information Sheets are an illustrative depiction of OWIP's five major data programs: CES, LAUS, QCEW, OES, and projections. The program information sheets give end users a general representation of the data products OWIP produces.

Hot Jobs Now

Hot Jobs Now is a pamphlet featuring high demand, high growth, and high wage occupations in Maryland. Hot Jobs Now is sourced from Maryland's long-term occupational projections.

Customer Consultations & Continuous Improvement

One of the key tenets of WIOA, MD Labor, and OWIP is meeting the needs of its customers. OWIP consults with its customers, including employers, Workforce Development Boards, educational bodies, students, and others, about the dissemination of LMI. The distribution of LMI provides relevant and integrated information to support customers' data-driven decision-making. To better address the needs of customers, OWIP measures customer satisfaction in several ways. If customers identify areas for improvement in products and services provided, OWIP strives to respond to these suggestions in a timely manner.

LMI Data Requests
Program Year 2019

	LMI Requests	Percent	Internal	External
Total LMI Requests	167	100%	81	86
Period				
July 2019	18	11%	10	8
August	14	8%	5	9
September	20	12%	13	7
October	14	8%	5	9
November	13	8%	8	5
December	10	6%	7	3
January 2020	18	11%	7	11
February	11	7%	7	4
March	11	7%	3	8
April	8	5%	3	5
May	17	10%	6	11
June	13	8%	7	6

OWIP served 167 customers through LMI data requests in PY 2019. Most LMI requests occur via email to OWIP's group LMI email address. September 2019 (12%), July 2019 and January 2020 (11%), May 2020 (10%), and August 2019 (8%) were the months with the most data requests in PY 2019. The average number of requests per month was 14, and more customer LMI requests were external (51%) than internal (49%).

Internal LMI requests come from within MD Labor. The requests come from different offices and divisions within MD Labor. Requests in PY 2019 came from the Office of the Secretary, the Governor's Workforce Development Board, the Division of Occupational and Professional Licensing, the Division of Unemployment Insurance, and other offices and divisions within MD Labor.

External LMI requests come from customers who work from any entity outside MD Labor. These external LMI requests exclude divisions and offices within MD Labor and American Job Centers. The requests came from individuals associated with the following organizations: Stanford Graduate School of Business, The Epicenter at Edgewood, Towson University, Regional Manufacturing Institute of Maryland, Comptroller of Maryland, HelioCampus, Davenport financial, and many others.

Customer Survey

To solicit detailed feedback from LMI customers, OWIP conducted a survey. The purpose of the customer survey was to gauge customer needs and continuously improve assistance and resources. The survey was distributed electronically to individuals who had previously requested access to LMI products.

Most respondents to the survey visited the OWIP website monthly (46%). Weekly visitors were also common (32%). Equal shares (7%, all following categories) visited the website daily, annually, or never.

Of the products OWIP produces, LAUS data was the most frequently used data product, with 80% of respondents relying on OWIP for LAUS data. Other popular data products used by respondents are the Monthly Employment Situation (65%), LMI data on the MWE (65%), and the Monthly Labor Review (63%).

> ### Keeping LMI Data Up-to-Date
>
> Given the number of frequent visitors, OWIP ensures data is updated promptly.
>
> ▶ Monthly data updates are typically posted within an hour after publication on the BLS website
> ▶ The LAUS webpage is updated twice a month with new data
> ▶ The Employment Situation and Monthly Labor Review are updated each month
> ▶ OWIP is currently in the process of updating the LMI webpage on the Monthly Workforce Exchange website with a new, more modern appearance.

Static tables and graphs are the most preferred manner of data presentation with 78% of respondents identifying that as their preferred way of consuming LMI. Interactive charts and graphs were second most popular (62%). Ninety-two percent of the respondents found what they were looking for on the OWIP

website, and most thought the website content, design, and ease of navigation either met or exceeded their expectations.

Below are a few of the recommendations made by LMI users throughout the year, and actions taken by OWIP to provide these enhancements.

- ▸ I would like to see continued (UI) claims by county, and initial and continued claims by industry and county, by week.
    - o OWIP worked with the Division of Unemployment Insurance to create a weekly claims file by industry and zip code.
- ▸ Downloadable QCEW data in Excel.
    - o OWIP is partnering with Towson University to develop a QCEW Industry Analysis Tool. This tool will allow for a more in-depth analysis of Maryland QCEW data as well as the option to download the data to several formats. Rollout is expected in the 2020 program year.
- ▸ Improve OES data presentation.
    - o OWIP is working on a more convenient way to download OES data. OES data will be presented in more traditional data tables using dataZoa tables (see below for more information) to present the data on the OWIP website.
- ▸ I would like county-level data on unemployment rates within specific demographics or target populations.
    - o Most data produced by US BLS and MD Labor does not contain demographic data. When requests are made for this type of data, OWIP incorporates data from the Census Bureau and shares this information with the requestor.

Information Technology Systems

OWIP strives to incorporate technology systems to simplify the reporting of LMI to improve internal efficiency and enhance productivity for its consumers.

Introduced in PY 2018 and fully implemented for PY 2019, OWIP adopted the Anaconda data science platform. It includes the Python programming language and other enhancements to create faster, more efficient workflows.

- For the COVID-19 pandemic, OWIP formed a partnership with the Division of Unemployment Insurance to use Python to create a report of the previous weeks' unemployment insurance claims file.
- For the QCEW program, Python is used to aggregate employer data in Maryland, such as establishments, employment, industries, and wages.
- OWIP is revising and expanding the Hot Jobs publication to better compare occupations for job seekers, training providers, students and others. Python is being used to develop the comparison algorithm.
- Python speeds the creation of Maryland's employment projections by more efficiently accessing and organizing various economic indicator variables including price levels, population and GDP.
- OWIP continues using Python to arrange and clean large databases like the Public Use Microdata Sample (PUMS) from the U.S. Census Bureau.

Partnerships & Collaborative Efforts

The following is a list of partnerships and collaborative efforts formed or continued in PY 2019.

Partnerships in Program Year 2019

Partnerships	Activity	Status
Projections Managing Partnership	OWIP's Director serves on the Board of Directors and chair of their training committee.	Ongoing
National Association of State Workforce Agencies	Member of LMI committee	Ongoing
Division of Unemployment Insurance	Partnering to improve UI claims reporting. Developed advanced UI data sharing and analytical techniques. Fostered methods to investigate UI fraud.	Ongoing
Maryland Benchmarks of Success	A collaborative effort between GWDB, MD Workforce Association, MD Department of Human Services, and MD Department of Housing and Urban Development to provide accessible cross-agency performance benchmarks.	Ongoing
National Governors Association State Collaborative Consortium	A nationwide effort to understand and support the on-demand workforce.	Ongoing

Partnerships in Program Year 2019

Partnerships	Activity	Status
Maryland Economic Development Commission	Developed methods to make LMI more accessible to commission members, and to increase LMI trainings and meetings.	Ongoing
Division of Unemployment Insurance & Adult Education	Updating the MD Reemployment Services profiling system	Ongoing
Potomac Electric Power Company	Use LMI to gain a better understanding of the economic difficulties PEPCO customers may face during the COVID-19 pandemic.	Ongoing
Unemployment Insurance Modernization	Coordinating with the Office of Information Technology, Unemployment Insurance Division, and the contractor Sagitec to ensure a seamless transition to the new system, meeting all BLS requirements for future deliverables	Ongoing
Maryland Department of Agriculture	Investigated and tracked prevailing wages for MD farmworkers.	Ongoing
Division of Workforce Development & Adult Learning/Correctional Education	A collaboration to evaluate possible training programs for an experimental correctional facility.	Ended March 2020
FSC First: Business Financing Solutions	A collaboration between FSC First, MD Commerce, and MD Comptroller to investigate possible impacts of COVID-19 on Prince George's industry sectors.	Ended April 2020
Maryland Department of Commerce	Evaluated growth in manufacturing in collaboration with the MD Policy Academy. Reviewed manufacturing grant proposals.	Ended May 2020
Maryland Higher Education Commission	Investigated market demand for target occupations to determine if there is a need for additional program certifications	Ended June 2020

OWIP leverage its WIG funds to partner with the Jacob France Institute (JFI) at the University of Baltimore for different projects. The current project with JFI is to overhaul the County Fact Sheets, currently hosted in the publications section of the OWIP website. The new data dashboard will contain

LMI data, and provide seamless access to relevant data data from other sources. This includes data not typically found on LMI websites such as information on job separations, Temporary Assistance for Needy Families, apprenticeship data, and more.

Through the use of the WIG funds, OWIP was able to form a partnership with Towson University to create a new tool for industry data analysis. The Industry Analysis Tool (IAT) is the result of their collaborative efforts. The IAT is a web-based application used for QCEW data analysis. The user can research county and workforce development areas, compare employment, establishments, and wages. Each data pull creates an associated bar chart in which the user can share the data via download or a web link.

By partnering with Geographic Solutions, a COVID-19 page is on the MWE homepage to provide job seekers with important employment information during these challenging economic times. The COVID-19 page highlights top recruiting employers, unemployment information, relevant COVID informational links, labor market news, upcoming recruitments, and job fairs.

Launching in early PY 2020, OWIP, in collaboration with Geographic Solutions, a redesigned and enhanced LMI landing page will greet users on the MWE. The redesign offers a wealth of LMI data, shortcuts to popular LMI data, and quick access to industries, occupations, and employers with the most advertised jobs. The redesign includes instant access to some of the most requested information, such as the unemployment rate and current job openings.

OWIP maintains contracts with Leading Market Technologies and Clicdata through the use of WIGS funds. Lead Market Technologies created dataZoa, which is used extensively on OWIP's website. DataZoa automates the formation and updating of data tables used by customers and is also used internally to assist in creating monthly publications. Clicdata is a business intelligence tool used to create interactive data dashboards on OWIP's website.

Data Sharing Agreements

The following agencies are partners through data-sharing agreements. Under a memorandum of understanding (MOU), the following agencies receive OWIP's full employer database.

- Maryland's Non-profit Consortium
- Jacob France Institute at the University of Baltimore
- Center for Smart Growth at the University of Maryland (Maryland Department of Transportation)
- Maryland National Capital Park and Planning Commission
- Frederick County Department of Finance
- Maryland Department of Planning

- Maryland Department of Commerce
- Montgomery County Economic Development Office
- Montgomery County Parks and Planning Office
- Maryland National Capital Park and Planning Commission – Prince George's County
- Maryland National Capital Park and Planning Commission – Montgomery County
- U.S. Census Bureau – Longitudinal Employer Household Dynamics Program

Occupational Licensing

For PY 2019, Maryland populated the ARC database with the "license.dbf" and "licauth.dbf" licensing files, as outlined by TEGL 5-19. The licensing files were submitted in June 2020, ensuring ARC had the latest data available. Maryland's licensing data is shared periodically with CareerOneStop and is their source for the License Finder. End users can search license requirements in any state by occupation, job title, or license name.

Website Statistics

Web statistics, with the customer surveys, help determine which data products have the most traction and what products could be improved, retired, or combined with other products. OWIP web statistics for August and September 2019 are excluded in this report due to an error with the metrics tracking tool that has since been resolved.

In PY 2019, end users accessed MD Labor's LMI landing page over 19,000 times. The webpage averaged over 1,930 visitors per month, up 34% from the previous year. May 2020 had the most visitors, while December 2019 had the fewest with 4,028 and 1,318 website visits, respectively. Three months (April, May, and June 2020) surpassed PY 2018's highest demand month for visitors (March 2019; 1,822 page visits).

Website access for the five major data products OWIP produces averaged 1,416 visitors per month, an increase of 58% from PY 2018. Moreover, every data product exhibited an increase in visitors from the

previous year. The OES program averaged the most visitors at over 2,600, up 40% from the prior year. Other notable website use increases were the QCEW and LAUS program with a growth of 107% and 85%, respectively.

Recommendations to ETA for Changes and Improvements

State LMI shops are dependent on UI systems as an input for much of the data produced through BLS statistical programs (particularly QCEW and LAUS) and for data utilized by the Census LEHD program. Maryland would like to see increased involvement from ETA regarding state UI system modernization efforts and LMI efforts to maintain consistent access to needed data.

There is a need for "real-time" data to support workforce alignment projects such as skill gap analysis and job surveys. Supplemental funding from ETA could lead to better information and decision making.

Grant Product Attribution

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